Evaluation of Probiotic Fermented Products and Effect in Human Alimentary Tract

Zahra Pourfraidon*[1]; Somayeh Dolatabadi[2]; Ali Farhadian[3]

1- Department of Biotechnology ,Bangalore University, India

2-PhD Student of Mycology , Utrecht University, Netherland

3-Microbiology Student ,BSc, Islamic Azad University, Kazeron, Iran

sh_pourfraidon@yahoo.com

Background & Objectives: A variety of probiotic functional foods are now available for human use world wide. Attempt were made to undertake biocompatibility studies using probiotics in newer symbiotic acidophilus milk to exert any beneficial health promoting properties , probiotics must have robust survival properties in the gut. Attempt toprovide independent information on the effects of new probiotics in the alimentary tract used in synbiotic fermented products.

Methods: Growth kinetics , pH , % titratable acidity , bile salt tolerance and antagonistic properties against known human pathogens namely Salmonella typhi , Mycobacterium segmatis and Candida albicans from clinical samples. The focus was to compare the persistence of probiotics namely L acidophilus, B bifidum and Enterococcus.sp. within the humangastrointestinal tract, then the growth of probiotic strains enriched on BHI and AST media ,then cultured on MRS were tested for their tolerance to bile acids and a coefficient of growth inhibition was calculated.

Results: Only L acidophilus and [(S thermophilus , L bulgaricus , and B bifidum 1:1:1)] had their growth slowed down by bile acids(0.2<coefficient of growth inhibition<0.4).The strains which survive this digestive stress conditions like L acidophilus and combination cultures along with B bifidum are able to inhibit the growth of enteropathogens .these probiotic cultures (Lacidophilus, L casei and B bifidum) were selected and used in production of novel functional foods like Acidophilus milk.

Conclusion: Two strains ofLactobacillus and B bifidum candidates to be used in the prepration of probiotic products and for their use as health-promoting bacteria

Keywords: Probiotics; Alimentary Tract; Fermented Products